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INFORMATION DISCLOSURE STATEMENT BY APPLICANT  
(Use Several Sheets If Necessary)Applicant: Kenneth J. Rothschild *et al.*

(37 CFR § 1.98(b))

Filing Date: 11/21/03

Group Art Unit: 1636

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Serial / Patent Number	Issue Date	Applicant / Patentec	Class	Subclass	Filing Date
WS	1	4,675,285	6/23/87	Clark <i>et al.</i>	435	6	9/19/84
	2	4,683,195	7/28/87	Mullis <i>et al.</i>	435	6	2/07/86
	3	4,774,339	9/27/88	Haugland <i>et al.</i>	548	405	8/10/87
	4	5,069,769	12/03/91	Fujimiya <i>et al.</i>	204	182.8	6/06/90
	5	5,091,328	2/25/92	Miller	437	52	11/21/89
	6	5,137,609	8/11/92	Manian <i>et al.</i>	204	180.1	1/31/92
	7	5,187,288	2/16/93	Kang <i>et al.</i>	548	110	5/22/91
	8	5,190,632	3/02/93	Fujimiya <i>et al.</i>	204	299 R	3/20/92
	9	5,248,782	9/28/93	Haugland <i>et al.</i>	548	110	12/18/90
	10	5,274,113	12/28/93	Kang <i>et al.</i>	548	405	11/01/91
	11	5,433,896	7/18/95	Kang <i>et al.</i>	252	700	5/20/94
	12	5,451,663	9/19/95	Kang <i>et al.</i>	530	367	4/08/93
	13	5,614,386	3/25/97	Metzker <i>et al.</i>	435	91.1	6/23/95
	14	5,622,829	4/22/97	King <i>et al.</i>	435	6	4/19/95
	15	5,643,722	7/01/97	Rothschild <i>et al.</i>	435	6	5/11/94
	16	5,451,663	9/19/95	Kang <i>et al.</i>	530	367	4/08/93
	17	5,654,150	8/05/97	King <i>et al.</i>	435	6	6/07/95
	18	5,693,473	12/02/97	Shattuck-Eidens <i>et al.</i>	435	6	6/07/95
	19	5,709,998	1/20/98	Kinzler <i>et al.</i>	435	6	12/15/93
	20	5,760,207	6/02/98	Kinzler <i>et al.</i>	536	24.3	6/03/96
	21	5,783,397	7/21/98	Hughes <i>et al.</i>	435	7.1	6/12/96
WS	22	5,861,494	1/19/99	Soppet <i>et al.</i>	536	23.1	6/06/95
	23	5,879,890	3/09/99	Laken <i>et al.</i>	435	6	1/31/97

## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
WS	24	EP 0 234 799	02.09.87	EPO	C 12 P 21/02			
WS	25	WO90/05785	5/31/90	PCT				

## OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

WS	26	Allen <i>et al.</i> , <i>Gel Electrophoresis and Isoelectric Focusing of Proteins</i> , Walter de Gruyter, New York 1984, pp. 17-62						
WS	27	<i>Antibodies: A Laboratory Manual</i> (E. Harlow and D. Lane, editors, Cold Spring Harbor Laboratory Press, 1988, pp. 53,72-73)						
WS	28	Bain <i>et al.</i> , "Site-Specific Incorporation of Nonnatural Residues during In Vitro Protein Biosynthesis with Semisynthetic Aminoacyl-tRNAs," <i>Biochemistry</i> 30:5411-21 (1991)						

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Date Considered:

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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)					
WS	29	Bain <i>et al.</i> , "Site-Specific Incorporation of Non-Natural Residues into Peptides: Effect of Residue Structure on Suppression and Translation Efficiencies," <i>Tetrahedron</i> 47:2389-2400 (1991)			
	30	Bruce and Uhlenbeck, "Specific Interaction of Anticodon Loop Residues with Yeast Phenylalanyl-tRNA Synthetase," <i>Biochemistry</i> 21:3921-3926 (1982)			
	31	Crowley <i>et al.</i> , "The signal sequence moves through a ribosomal tunnel into a noncytoplasmic aqueous environment at the ER membrane early in translocation," <i>Cell</i> 73:1101-1115 (1993)			
	32	<i>Current Protocols in Molecular Biology</i> (F.M. Ausubel <i>et al.</i> editors, Wiley Interscience, 1993), pp. 10-16, 10-77			
	33	Czworkowski <i>et al.</i> , "Fluorescence Study of the Topology of Messenger RNA Bound to the 30S Ribosomal Subunit of <i>Escherichia coli</i> ," <i>Biochemistry</i> 30:4821-4830 (1991)			
	34	Da Poian, A. T., <i>et al.</i> , "Kinetics of intracellular viral disassembly and processing probed by Bodipy fluorescence dequenching," <i>J Virol Methods</i> 70(1), 45-58 (1998)			
	35	Doty <i>et al.</i> , "Strand Separation and Specific Recombination in Deoxyribonucleic Acids: Physical Chemicals Studies," <i>Proc. Natl. Acad. Sci. USA</i> 46:461-476 (1960)			
	36	DiCesare <i>et al.</i> , "A High-Sensitivity Electrochemiluminescence-Based Detection System for Automated PCR Product Quantitation," <i>BioTechniques</i> 15:152-59 (1993)			
	37	Felgner <i>et al.</i> , "Lipofection: A highly efficient, lipid-mediated DNA-transfection procedure," <i>Proc. Natl. Acad. Sci. USA</i> 84:7413-17 (1987)			
	38	Happ <i>et al.</i> , "New Approach to the Synthesis of 2'(3')-O-Aminoacyl Oligoribonucleotides," <i>J. Org. Chem.</i> 52:5387-91 (1987)			
	39	Hardesty <i>et al.</i> , "Extension and Folding of Nascent Peptides on Ribosomes." <i>The Translational Apparatus</i> , Nierhaus <i>et al.</i> ed: New York and London; Plenum Press. p. 347-358 (1993)			
	40	Hardesty <i>et al.</i> , "Ribosome function determined by fluorescence," <i>Biochimie</i> 74:391-401 (1992)			
	41	Heckler <i>et al.</i> , "Preparation of 2'(3')-O-Acyl-pCpA Derivatives as Substrates for T4 RNA Ligase-Mediated "Chemical Aminoacylation"," <i>Tetrahedron</i> 40:87-94 (1984)			
	42	Heckler <i>et al.</i> , "T4 RNA Ligase Mediated Preparation of Novel "Chemically Misacylated" tRNA <sup>Pro</sup> s," <i>Biochemistry</i> 23:1468-73 (1984)			
	43	Hemmila, I.A., <i>Chemical Analysis "Applications of Fluorescence in Immunoassays"</i> , (Wiley&Sons 1991) pp.138-159			
	44	Hudson, "Methodological Implications of Simultaneous Solid-Phases Peptide Synthesis. 1. Comparison of Different Coupling Procedures," <i>J. Org. Chem.</i> 53:617-624 (1988)			
	45	Johnson <i>et al.</i> , "Protein Synthesis and Secretion as seen by the Nascent Protein Chain," <i>The Translational Apparatus</i> , Nierhaus <i>et al.</i> ed: New York and London; Plenum Press. p. 359-370 (1993)			
	46	Johnson <i>et al.</i> , "N-Acetyllysine Transfer Ribonucleic Acid: A Biologically Active Analogue of Aminoacyl Transfer Ribonucleic Acids," <i>Biochemistry</i> 15:569-575 (1976)			
	47	Johnson, "Chemically Modified Aminoacyl-tRNA as a Probe of Ribosome Structure: the Synthesis and in vitro Activity of $\epsilon$ -N-acetyl-Lys-tRNA," 1973 Thesis Excerpts, University of Oregon, Eugene, Oregon			
	48	Karolin <i>et al.</i> , "Fluorescence and Absorption Spectroscopic Properties of Dipyrrometheneboron Difluoride (BODIPY) Derivatives in Liquids, Lipid Membranes, and Proteins," <i>J. Am. Chem. Soc.</i> 116:7801-7806 (1994)			
	49	Keller, R. C., <i>et al.</i> , "Characterization of the Resonance Energy Transfer Couple Coumarin-Bodipy and its Possible Applications in Protein-Lipid Research," <i>Biochem Biophys Res Commun</i> 207(2), 508-14 (1995)			
	50	Kim, D., and Choi, C., "A Semicontinuous Prokaryotic Coupled Transcription/Translation System Using a Dialysis Membrane," <i>Biotechnol Prog</i> 12, 645-649 (1996)			
	51	Kopp <i>et al.</i> , "Chemical Amplification: Continuous Flow PCR on a Chip," <i>Science</i> 280:1046 (1998)			
	52	Kozak, "Point Mutations Define a Sequence Flanking the AUG Initiator Codon that Modulates Translation by Eukaryotic Ribosomes," <i>Cell</i> 44:283-292 (1986)			
	53	Kramer <i>et al.</i> , "In Vitro engineering using synthtic tRNAs with altered anticodons including four-nucleotide anticodons," <i>Methods Mol Biol.</i> 77:105-16 (1998)			
	54	Kramer <i>et al.</i> , "N-terminal and C-terminal modifications affect of in vitro synthesized proteins," <i>Int J Biochem Cell Biol.</i> 31:231-41 (1999)			
	55	Krieg <i>et al.</i> , "Photocrosslinking of the signal sequence of nascent preprolactin to the 54-kilodalton polypeptide of the signal recognition particle," <i>Proc. Natl. Acad. Sci. USA</i> 83:8604-08 (1986)			
WS	56	Kudlicki, W. <i>et al.</i> , "Chaperone-dependent Folding and Activation of Ribosome-bound Nascent Rhodanse," <i>J Mol Biol</i> 244(3), 319-31 (1994)			
	57	Laemmli, U. K., "Cleavage of Structural Proteins during the Assembly of the Head of Bacteriophage T4," <i>Nature</i> 227:680-685 (1970)			
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WS	58	Ma <i>et al.</i> , "In Vitro Protein Engineering Using Synthetic tRNA <sup>As</sup> with Different Anticodons," <i>Biochemistry</i> 32:7939-7945 (1993)			
	59	Marmur and Lane, "Strand Separation and Specific Recombination in Deoxyribonucleic Acids: Biological Studies," <i>Proc. Natl. Acad. Sci. USA</i> 46:453-461 (1960)			
	60	<i>Molecular Cell Biology</i> (J. Darnell <i>et al.</i> editors, Scientific American Books, N.Y., N.Y. 1991) pp. 119-132			
	61	Nemoto <i>et al.</i> , "Fluorescence labeling of the C-terminus of proteins with a puromycin analogue in cell-free translation systems," <i>FEBS Letters</i> 462:43-46 (1999)			
	62	Neu and Heppel, "Nucleotide Sequence Analysis of Polyribonucleotides by Means of Periodate Oxidation Followed by Cleavage with an Amine," <i>J. Biol. Chem.</i> 239:2927-34 (1964)			
	63	Noren <i>et al.</i> , "A General Method for Site-Specific Incorporation of Unnatural Amino Acids into Proteins," <i>Science</i> 244:182-188 (1989)			
	64	Odom, O. W., <i>et al.</i> , "In vitro engineering using acyl-derivatized tRNA," In <i>Protein synthesis: Methods and Protocols</i> , PP.93-103, (Humana Press, Totowa, NJ.)			
	65	Odom <i>et al.</i> , "Movement of tRNA but Not the Nascent Peptide during Peptide Bond Formation on Ribosomes," <i>Biochemistry</i> 29:10734-10744 (1990)			
	66	Patchornik <i>et al.</i> , "Photosensitive Protecting Groups," <i>J. Am. Chem. Soc.</i> 92:6333-35 (1970)			
	67	Pavlopoulos, <i>et al.</i> , "Laser action from a tetramethylpyromethene-BF <sub>3</sub> .sub.2 complex," <i>APP. OPTICS</i> 27:4998-4999 (1988)			
	68	Picking <i>et al.</i> , "The use of synthetic tRNA as probes for examining nascent peptides on <i>Escherichia coli</i> ribosomes," <i>Biochimie</i> 73:1101-1107 (1991)			
	69	Picking <i>et al.</i> , "Evidence for RNA in the Peptidyl Transferase Center of <i>Escherichia coli</i> Ribosomes as Indicated by Fluorescence," <i>Biochemistry</i> 31:12565-12570 (1992)			
	70	Picking <i>et al.</i> , "The Conformation of Nascent Polylysine and Polyphenylalanine Peptides on Ribosomes," <i>J. of Biological Chemistry</i> 266:1534-1542 (1991)			
	71	Picking <i>et al.</i> , "Fluorescence Characterization of the Environment Encountered by Nascent Polyalanine and Polyserine as They Exit <i>Escherichia coli</i> Ribosomes during Translation," <i>Biochemistry</i> 31:2368-2375 (1992)			
	72	Picking <i>et al.</i> , "A synthetic alanyl-initiator tRNA with initiator tRNA properties as determined by fluorescence measurements: Comparison to a synthetic alanyl-elongator tRNA," <i>Nucleic Acids Research</i> 19:5749-5754 (1991)			
	73	Pillai, "Photoremovable Protecting Groups in Organic Synthesis," <i>Synthesis</i> 1-26 (1980)			
	74	Powell <i>et al.</i> , "Molecular Diagnosis of Familial Adenomatous Polyposis," <i>N. Engl. J. Med.</i> 329:1982-87 (1993)			
	75	Pratt, "Coupled Transcription-Translation in Prokaryotic Cell-Free System," ( <i>Transcription and Translation</i> , B.D. Hames and S.J. Higgins, Editors, p. 179-209, IRL Press, Oxford, 1984)			
	76	Promega Technical Bulletin No. 182; tRNA <sup>codon</sup> ™: Non-radioactive Translation Detection System, Sept. 1993			
	77	Reis, R. C., <i>et al.</i> , "A novel methodology for the investigation of intracellular proteolytic processing in intact cells," <i>Eur J Cell Biol</i> 75(2), 192-7 (1998)			
	78	<del>Rowan and Bodmer, "Introduction of a myc Reporter Tag to Improve the Quality of Mutation Detection Using the Protein Truncation Test," <i>Human Mutation</i> 9:192-196 (1997)</del> duplicate			
	79	Sampson and Uhlenbeck, "Biochemical and physical characterization of an unmodified yeast phenylalanine transfer RNA transcribed <i>in vitro</i> ," <i>Proc. Natl. Acad. Sci. USA</i> 85:1033-37 (1988)			
	80	Seong and RajBhandary, " <i>Escherichia coli</i> formylmethionine tRNA: Mutations in <sup>500</sup> sequence conserved in anticodon stem of initiator tRNAs affect initiation of protein synthesis and conformation of anticodon loop," <i>Proc. Natl. Acad. Sci. USA</i> 84:334-338 (1987)			
	81	Shore <i>et al.</i> , "A Fluorescent Probe Capable of Incorporation into Nascent Polypeptide Chains," 1986 <i>Federation Proceedings</i> 45, 1566 Abstract			
	82	Shore <i>et al.</i> , "Accessibility of AA-tRNA and Nascent Chain During Protein Synthesis," 1988 <i>FASEB Journal</i> 2, A1045 Abstract			
	83	Shore, "The Use of Fluorescent-Labeled Amino Acids to Examine the Environment of Ribosome-Bound Nascent Polypeptide Chains," 1991 Dissertation, University of Oklahoma, Norman Oklahoma			
	84	Spirin <i>et al.</i> , "A Continuous Cell-Free Translation System Capable of Producing Polypeptides in High Yield," <i>Sci.</i> 242:1162-64 (1988)			
WS	85	Stephens, "High-Resolution Preparative SDS-Polyacrylamide Gel Electrophoresis: Fluorescent Visualization and Electrophoretic Elution-Concentration of Protein Bands," <i>Anal. Biochem.</i> 65:369-79 (1975)			
	86	Treibs & Kreuzer, "Disfluorboryl-komplexe von di- und tripyrrolmethenen," <i>Liebigs Ann. Chem.</i> 718:208-223 (1968)			
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WS	87	Tsalkova <i>et al.</i> , "The effect of a hydrophobic N-terminal probe on translational pausing of chloramphenicol acetyl transferase and rhodanese," <i>J Mol Biol.</i> 286:71-81 (1999)			
↓	88	Turcatti <i>et al.</i> , "Probing the Structure and Function of the Tachykinin Neurokinin-2 Receptor through Biosynthetic Incorporation of Fluorescent Amino Acids at Specific Sites," <i>J Biol Chem</i> 271(33), 19991-8 (1996)			
↓	89	Varshney U, RajBhandary UL, "Initiation of protein synthesis from a termination codon," <i>Proc Natl Acad Sci U S A</i> 87(4):1586-90 (1990)			
↓	90	Varshney <i>et al.</i> , "Direct Analysis of Aminoacylation Levels of tRNAs in Vivo," <i>J. Biol. Chem.</i> 266: 24712-24718 (1991)			
↓	91	Vecesey-Semjen <i>et al.</i> , "The Staphylococcal $\alpha$ -Toxin Pore Has a Flexible Conformation," <i>Biochemistry</i> 38 4296-4302 (1999)			
↓	92	Walker, B. <i>et al.</i> , "Functional Expression of the $\alpha$ -Hemolysin of Staphylococcus aureus in Intact Escherichia coli and in Cell Lysates," <i>J. Biol. Chem.</i> 267:10902-10909 (1992)			
WS	93	Yao S <i>et al.</i> , "SDS capillary gel electrophoresis of proteins in microfabricated channels," <i>PNAS</i> 96:5372-5377 (1999)			
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